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Your Reference: 2002P15476/GB01/R76/CF/GSD
Application No: GB 0228348.9

The Patent Office
Patents Directorate

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6 June 2003

Dear Sirs

Patents Act 1977:

Combined Search and Examination Report under Sections 17 and 18(3)

Latest date for reply:

1 October 2004

I enclose two copies of my search and examination report and two copies of the citations.

By the above date you should either file amendments to meet the objections in the report or make observations on them. If you do not, the application may be refused.

Publication

I estimate that, provided you have met all formal requirements, preparations for publication of your application will be completed soon after **24 February 2004**. You will then receive a letter informing you of completion and telling you the publication number and date of publication.

Amendment/withdrawal

If you wish to file amended claims for inclusion with the published application, or to withdraw the application to prevent publication, you must do so before the preparations for publication are completed. **No reminder will be issued.** If you write to the Office less than 3 weeks before the above completion date, please mark your letter prominently: "**URGENT - PUBLICATION IMMINENT**".

[†]Use of E-mail: Please note that e-mail should be used for correspondence only.



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Yours faithfully

Nigel Hanley
Examiner

Important information about combined search and examination

I also ask that you take note of the following points. These might have a bearing on the future stages of your application because the examination report has been sent to you before your application has been published.

- (a) You may file voluntary amendments before making a full response to my examination report. We will publish with your application any new or amended claims you file voluntarily or as a full response, provided that they are received before preparations for publication are completed. It would help us when you file amendments before publication if you could prominently indicate in a covering letter whether or not the amendments are intended as a full response to the examination report.
- (b) If you file a full response to the examination report before your application is published I will consider it as soon as possible. However, if this would disrupt the publication of your application, I would have to delay taking any action until the application had been published. This delay could be up to 3 months, depending upon when we receive your response.
- (c) There is another situation when there might be a delay between you filing a full response and the Patent Office responding to it. This would arise if you met all my objections but your application had not or had only recently been published. I could not report the outcome of my re-examination until I was satisfied that the search was complete for documents published before the priority date of your invention and that anybody interested in the application has had three months following publication of the application to make observations on the patentability of your invention.
- (d) Provided that the requirements of the Act have been met, I can send your application to grant as early as three months after publication. Before doing so I will bring the original search up to date and raise with you any further objection that might result from this top-up search. However, there is a possibility that at that time I may not have access to all the patent applications published after the priority date of your invention and of possible relevance to your application. If this is the case I would have to complete the search after grant and if necessary raise any new found novelty objection then.



Application No: GB 0228348.9
Claims searched: 1-16

Examiner: Nigel Hanley
Date of search: 5 June 2003

Patents Act 1977 : Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance	
Y	1-14	FR 2675919 A1	AEROSPATIALE - See Abstract and 20, Fig 1 & 3 and related description. Note the receipt by an autonomous vehicle of secondary navigation signals from an airport beacon.
Y	1-14	US 6195609 B1	PILLEY - See whole document especially Fig 25 & 26 and Column 137 -140. Note equipping of vehicle with apparatus for use with an Airport Control and Management system.

Categories:

X Document indicating lack of novelty or inventive step	A Document indicating technological background and/or state of the art.
Y Document indicating lack of inventive step if combined with one or more other documents of same category.	P Document published on or after the declared priority date but before the filing date of this invention.
& Member of the same patent family	E Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^V:

G4Q, G3N, H4D

Worldwide search of patent documents classified in the following areas of the IPC⁷ :

G08G, G01S

The following online and other databases have been used in the preparation of this search report :

EPOQUE, JAPIO & WPI



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Patents Act 1977

Combined Search and Examination Report under Sections 17 & 18(3)

Inventive step

1. The invention as defined in claims 1 -14 is obvious in view of what has already been disclosed in the following documents when combined with the common general knowledge:

FR 2675919 A1 AEROSPATIALE
US 6195609 B1 PILLEY

2. The use of autonomous vehicles and their operation according to constraints is well known as acknowledged on page 1 of your application.

3. AEROSPATIALE describes an automated vehicle for towing aircraft, which as seen in Figure 3, features two receivers for receiving navigation information. The first source, 50, is a standard GPS system whereas the second or subsidiary source is from an airport beacon and contains a highly accurate location marker. It is considered that such an accurate marker would form the basis for any ground based augmentation system which could be used to land aircraft at the airport.

4. Consequently the man skilled in the art would not require any inventive ingenuity in preparing an autonomous vehicle and equipping it with facilities to follow a route, issue an alarm or go to a muster station.

5. PILLEY is also included as it shows the concept of an Airport Control and Management system which includes at Column 137 details of vehicles for use within the system. It is noted that Figures 25 and 26 only show a single source for navigation information but the description does refer to receiving information from other vehicles over the VHF/UHF links. The specification also describes the use of differential GPS at Column 130 Line 22 and later in the specification shows the use of an airport reference marker which contains a highly accurate position.

6. PILLEY is therefore considered to offer support to the argument that the method of claim 1 and vehicle of claim 14 are not considered inventive.

Clarity and Support

7. Whilst it is generally clear in the claim how each device interacts with each other, the claim would benefit from amendment to show that the calculation occurs within the



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[Examination Report contd.]

vehicle as claimed in claim 2. In particular, steps (c), (d), & (e) all refer to the navigation signals and constraint data being received in the vehicle and it therefore follows that the only place such a calculation can occur is in the vehicle. In view of this point, consideration should also be given to deleting claim 2 as it appears to be redundant.

8. Claim 14 appears to require amendment in order to bring it into conformity with claim 1. In particular, there is no reference to the production of a signal in response to the comparing step or the operation in accordance with the predefined strategy in response to the status of the signal of claim 1.

9. Claim 14 would also benefit from amendment to show the interconnections between the various means since the current ordering of the features within the claim does not assist the reader in understanding the manner by which the vehicle operates. By way of example the claim shows a processor for calculating the position but only later in the claims is it clear that this is bases on the two sets of signals received.

10. In making the necessary amendments to claims 1 and 14 care should be taken to ensure consequential amendments are made to the statements of invention on pages 1-3 of the specification.

11. The use of reference numerals and brackets in a claim may, in certain circumstances, obscure the scope of the claim and should be avoided.